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10/814,176	04/01/2004	Scott Patrick Campbell	M4065.0825/P825-A	7369
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DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER HANNETT, JAMES M	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/814,176

Applicant(s)

CAMPBELL, SCOTT PATRICK

Examiner

JAMES M. HANNETT

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-68 is/are pending in the application.
- 4a) Of the above claim(s) 36-51 and 57-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19,20,23,25,27,29,30,32-35 and 52-56 is/are rejected.
- 7) ☒ Claim(s) 21,22,24,26,28 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/1/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I in the reply filed on 4/28/2008 is acknowledged. The traversal is on the ground(s) that the search of the three different species would not be an undue burden on the examiner. This is not found persuasive because The Examiner views the search as being an increased burden on the examiner since the different species contain different limitation that would require independent searches..

The requirement is still deemed proper and is therefore made FINAL.

Claims 36-51 and 57-68 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/28/2008.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 19 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,738,171 Campbell. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim 19 of the present invention includes all of the limitations of Claim 1 of U.S. Patent No. 6,738,171 Campbell.

### ***Response to Arguments***

Applicant's arguments filed 11/6/2008 have been fully considered but they are not persuasive. The applicant has amended the claims to specify that the "at least one layer of the multiple pixel layers comprising an in-pixel circuit element" the applicant asserts that Fan does not teach this limitation since the layer used by the examiner to meet the limitation (50) is an encapsulant and planarization layer. The applicant asserts that this layer can not be reasonably characterized as an "in-pixel circuit element" The applicant asserts that an "in-pixel circuit element" is a layer "fabricated through semiconductor fabrication to form in-pixel circuit elements such as electrodes for photoreceptor".

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the in-pixel circuit element is fabricated through semiconductor fabrication to form in-pixel circuit elements such as electrodes for photoreceptor ) are not recited in the

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rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The examiner asserts that the claims are written broadly and do not require the “at least one layer of the multiple pixel layers” to be a layer of electrodes. Furthermore, the examiner asserts that an “encapsulant and planarization layer” alters the optical characteristics of the light before it reaches the photosites to be converted to an electric charge. Therefore, the encapsulant and planarization layer changes characteristics of the output signal of the pixel. The examiner therefore, views the encapsulant and planarization layer as an in pixel circuit element.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**1:** Claims 19, 20, 23, 25, 27, 29, 30, 32-35 and 52-56 are rejected under 35

U.S.C. 102(e) as being anticipated by USPN 6,274,917 B1 Fan et al.

**2:** As for Claim 19, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 A device, comprising: a substrate of a semiconductor material (34); an array of sensing pixels fabricated over said substrate (34), each sensing pixel

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being responsive to input radiation to produce a pixel output representative of received radiation by said sensing pixel, wherein said sensing pixels are formed of multiple pixel layers (35-50); and an optical mask layer (47-49) formed over said substrate (34) in an optical path of the input radiation, said optical mask layer (47-49) having a plurality of optical elements (47-49) to modify a property of the input radiation (modifies spectrum and angle of incidence) prior to detection by said sensing pixels (37 is sensing part of pixel), and wherein at least one layer (50) of said multiple pixel layers (50-41) is formed over said optical mask layer (47-49). an “encapsulant and planarization layer” alters the optical characteristics of the light before it reaches the photosites to be converted to an electric charge. Therefore, the encapsulant and planarization layer changes characteristics of the output signal of the pixel. The examiner therefore, views the encapsulant and planarization layer as an in pixel circuit element.

3: In regards to Claim 20, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein said optical mask layer (47-49) is formed atop of at least one layer (46) of said multiple pixel layers (34-50).

4: As for Claim 23, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element (47-49) focuses (47) the input radiation to a corresponding sensing pixel (37) underneath said each optical element (47-49).

5: In regards to Claim 25, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element (47-49) selectively separates one color (filters R,G,B light) in the input radiation from another different color in the input radiation.

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6: As for Claim 27, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element (47-49) spatially covers only one sensing pixel.

7: In regards to Claim 29, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each sensing pixel (37 + layers directly above) is an active pixel (CMOS sensor) (See Abstract) which has in-pixel circuit elements to convert radiation-induced charge into a current or voltage.

8: As for Claim 30, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element (47-49) spatially covers only one sensing pixel.

9: In regards to Claim 32, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element (47-49) both focuses (47) a beam and spectrally filters (49) the same beam.

10: As for Claim 33, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element is optically absorptive. Furthermore, the examiner asserts that it is inherent that the optical element will exhibit some optical absorption properties.

11: In regards to Claim 34, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element is optically reflective. Fan et al teaches for the color filters allowing a specific color to pass and reflecting the other colors.

12: As for Claim 35, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein each optical element is optically refractive or diffractive. The examiner asserts that it is inherent that the optical elements will have a refractive index and therefore, be optically refractive.

13: In regards to Claim 52, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 An imager, comprising: a plurality of pixel cells configured to convert incident light into an electrical signal, each pixel cell comprising a plurality of pixel layers (34-50); and an optical layer (41-49) between two (50-37) of said plurality of pixel layers (34-50), wherein said optical layer (41-49) is configured to modify the incident light prior to conversion by the pixel cells (37 is the conversion portion of the pixel cell). an “encapsulant and planarization layer” alters the optical characteristics of the light before it reaches the photosites to be converted to an electric charge. Therefore, the encapsulant and planarization layer changes characteristics of the output signal of the pixel. The examiner therefore, views the encapsulant and planarization layer as an in pixel circuit element.

14: As for Claim 53, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein the optical layer (41-49) comprises a plurality of optical elements (47), each configured to focus the incident light on a respective pixel cell (37).

15: In regards to Claim 54, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein the optical layer (41-49) comprises a plurality of optical elements (49), each configured to spectrally filter (Color filter) the incident light prior to conversation by the pixel cells (37).



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16: As for Claim 55, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein the optical layer (41-49) is further configured to separate the incident light into constituent colors (RGB).

17: In regards to Claim 56, Fan et al depicts in Figures [6 and 9] and teaches on Column 6, Lines 15-51 wherein the optical layer (41-49) is further configured to focus (47) each color (output of 49 is focused by micro-lens array 47) of the incident light onto a respective pixel cell (37).

***Allowable Subject Matter***

**18:** Claims 21, 22, 24, 26, 28 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hannett whose telephone number is 571-272-7309. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen, Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/James M. Hannett/  
Primary Examiner  
Art Unit 2622

JMH  
January 13, 2009